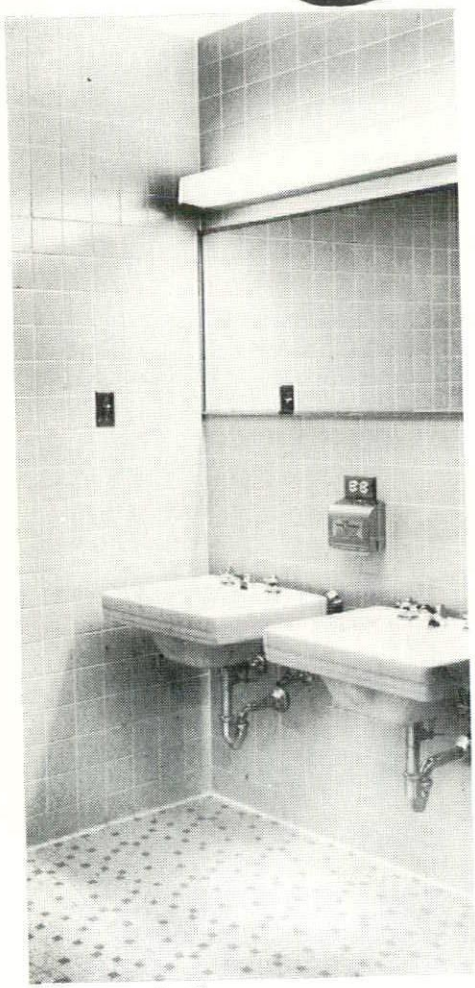
new mexico architect

may - june 1963 35c

Monarch TILE

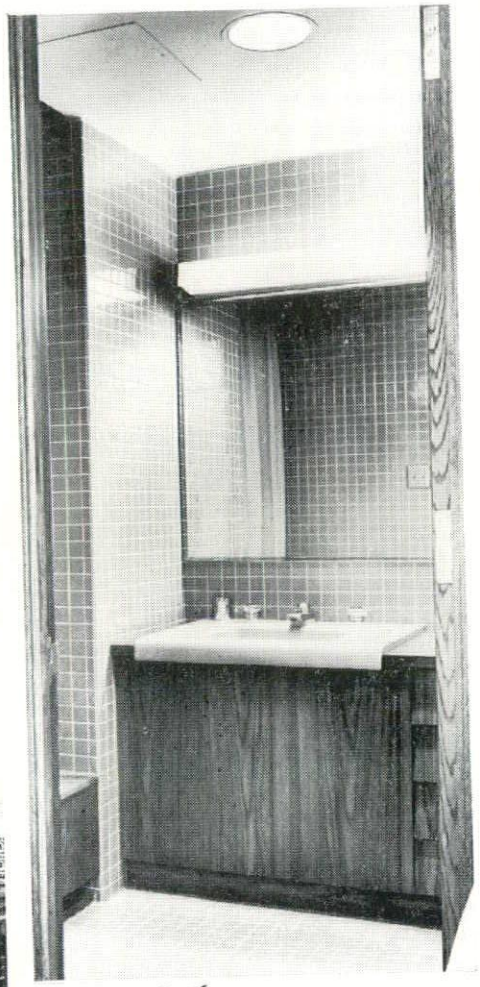
...REACHES A NEW HIGH IN MILE-HIGH DENVER

The magnificent new home office building recently finished in Denver, Colorado, of Western Reserve Federal Savings, contains more than 16,000 square feet of Monarch Tile on walls and floors.



Monarch® TILE

A typical men's washroom in the Western Federal Savings Building, showing the installation of Monarch unglazed floor tile, and ceiling-high walls of Monarch 4¼x4¼ glazed wall tile.



Monarch® TILE

Typical executive's private washroom in the new Western Federal Savings Building, showing the installation of Monarch unglazed floor tile, and Monarch glazed wall tile, emphasizing the matching joint 2x2 tile on both floor and walls.

MONARCH TILE MANUFACTURING, INC., FACTORY AND GENERAL OFFICE, SAN ANGELO, TEXAS

Member, Tile Council of America, Member Producers Council, Division Offices in Five Cities, Showrooms and Warehouses in 15 Cities

nma

vol. 5 • nos. 5 and 6 • may-june 1963 • the new mexico architect

Conversations in Santa Fe
with Lewis Mumford 7

A New Mexico Sketch
—John McHugh 10

News 11

The College of Education, UNM.
—Flatow, Moore, Bryan and Fairburn 15

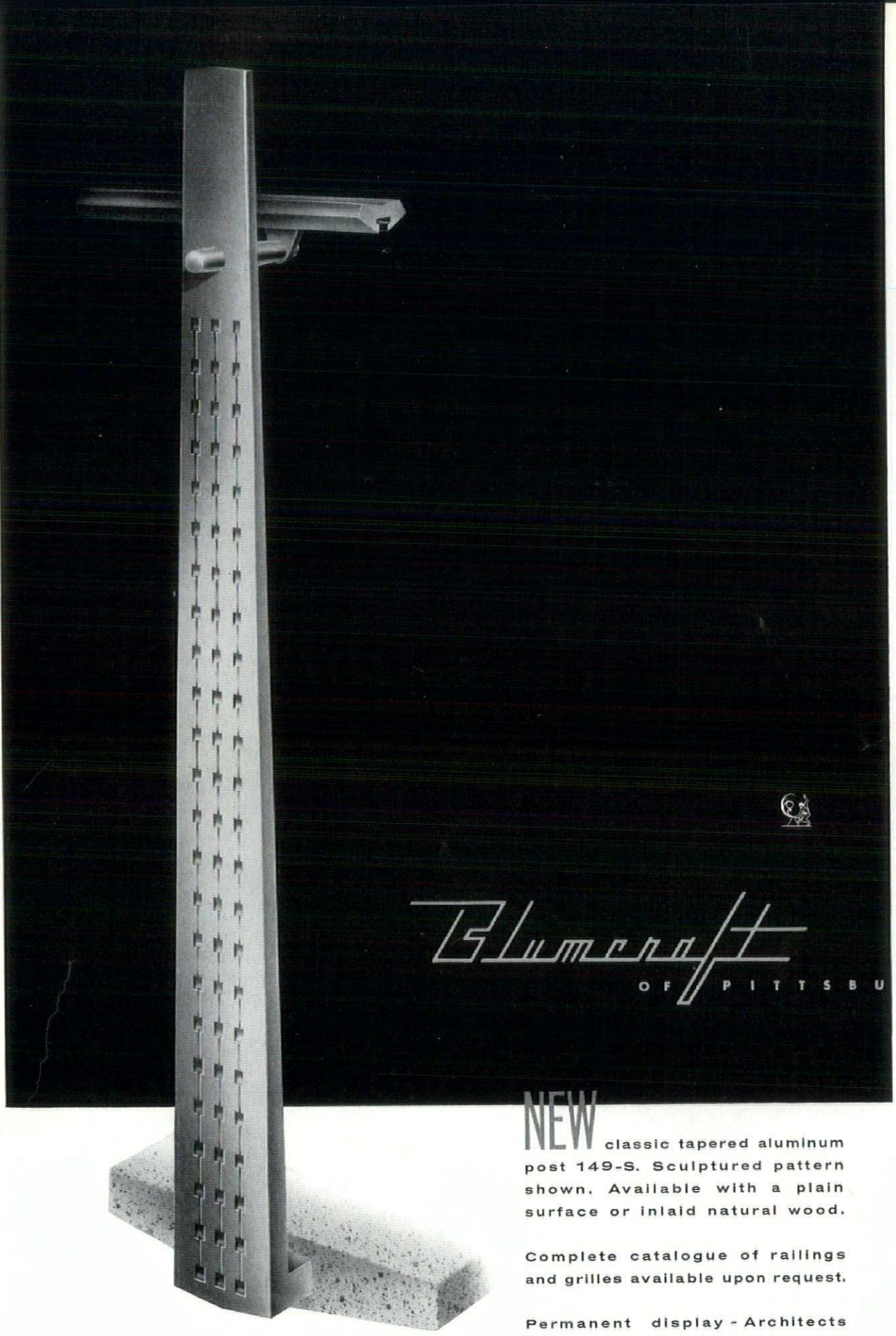
Sindi Roofscapes
—Harold R. Benson 22

Index of Advertisers 26

(Cover photograph by Dick Kent)

—Official Publication of the New Mexico Chapter, American Institute of Architects—

Printed by: Hall - Poorbaugh Press, Inc. **Roswell, New Mexico**



Blumcraft
OF PITTSBURGH

NEW classic tapered aluminum post 149-S. Sculptured pattern shown. Available with a plain surface or inlaid natural wood.

Complete catalogue of railings and grilles available upon request.

Permanent display - Architects Building, 101 Park Ave., New York, N.Y.

Conversations in Santa Fe with Lewis Mumford no. 4

This is the last of four articles in the NMA in which various characteristics and problems of Santa Fe architecture and urban planning have been discussed by and with Lewis Mumford. Earlier issues of the magazine dealt with the unique architectural challenge of Santa Fe, the problem of the historic style ordinance and plans to regulate the city's pattern of growth. The present article considers the means of achieving architectural harmony in a changing community.

This series grew out of a small supper and an evening of informal discussion arranged by Mr. J. B. Jackson and the staff of LANDSCAPE magazine at the time of Mr. Mumford's visit to the city last April, 1962. A tape recording which followed the conversation forms the basis of these texts. Occasional sentences have been reworded for the sake of clarity and the order has necessarily been somewhat rearranged to allow a division of the single discussion into four shorter parts. Editorial work on these article was done by Bainbridge Bunting.

The informality and spontaneity of the occasion should be kept in mind as one reads these remarks. Mr. Mumford and other parties quoted have seen the revised accounts and have very generously conceded their appearance in print.

The editors of the NMA are extremely grateful for this permission. It is, of course, a great honor for a small regional publication to present the opinions of a person of Lewis Mumford's stature. But even more, the editors are conscious of the service they perform in giving the architects and architectural public of New Mexico an opportunity to share in Mr. Mumford's views. These articles cannot help but become important points of reference in any future plans and discussions of New Mexico architecture.

Mr. Jones: Would you be good enough, Mr. Meem, to summarize for us your reasons for advocating the Historic Zone in Santa Fe and for supporting the Historic Style Ordinance?

Mr. Meem: I feel very strongly, Mr. Jones, that Santa Fe has a problem of conservation similar to that which other older cities in America have had. Boston has it on Beacon Hill. If Beacon Hill were allowed to express just any architect's ideas of how Beacon Hill should look in the Twentieth Century rather than how it really did look, we would not have a Beacon Hill; we would have something very different. The same is true here in Santa Fe. I therefore think that it is absolutely legitimate for Santa Fe to have an Historical Zone in the center of the city where are the majority of the older buildings. In conserving the old buildings and in building new ones, we should follow very closely the patterns that have been set from time immemorial in this area. I have therefore strongly backed the ordinances which attempt to establish the Historical Zone in Santa Fe. And I furthermore think it is legitimate, inside of this zone, for architects to submit to the discipline of certain forms. On the other hand, I do admit that the present Historic Zone Ordinance is probably too rigid and inflexible.

We have no enabling act here which would permit a more flexible type of commission to decide what would be appropriate or not appropriate. The present ordinance attempts actually to decide styles of architecture which is extremely difficult. As you know we have seen built some monstrosities that conform perfectly with the minute stipulations of the ordinance but which are so bad and which defeat our purpose. I would like very much to see us have an enabling act passed, passed through the Legislature similar to those in Massachusetts and California whereby cities can establish an historical zone and set up an advisory commission or a planning commission which would have freedom to pass on the individual designs submitted for its approval.

There has got to be a certain flexibility; you cannot lay down laws about zoning, as our ordinance does now, merely with a definition. There should be a commission of some sort which would permit slight variations in the working out of specific problems.

Mr. Clark: Who would make up this commission; architects or laymen?

Mr. Meem: In California the commission corresponds to what we have here in the Historical Sub-committee of the Planning Commission. In Santa Barbara

a group including the museum and various civic organizations make the appointments.

Mr. Clark: In Santa Fe, who would make up such a commission to pass on what was acceptable? Would it be limited to architects?

Mr. Meem: I don't think you would confine it to architects. I think that it should be as wise a group of people as we could find.

Mr. Clark: And more wise than our present Historical Style Committee?

Mr. Meem: Yes, I would say people with more experience, perhaps, and perhaps more architects on it. And if we had this enabling law passed by the State of New Mexico, we would then be able to have a commission that exercised the function of taste which now it is not permitted to do. As things stand you have automatically to approve a building if it conforms to the formal definitions of one of the several styles of sanctioned architecture—no matter how bad it is. The result has sometimes been very poor buildings indeed.

Mr. Mumford: I would agree with you; it is very dangerous to lay down by ordinance a fixed architectural style. That is the way to kill the life of architecture.

Mr. Meem: The standard that was established in Massachusetts, I understand, is that the governing body of Beacon Hill is permitted to exercise its judgment of what would conform with the older buildings on the Hill.

Mr. Williams: Has that been contested legally?

Mr. Meem: They passed an enabling act and then had it tested by the Supreme Court of Massachusetts. This enables the commission to pass judgment on aesthetic grounds without having to prove step by step whether the design in question is actually 18th century architecture or not. If we had something like that, it seems to me that we could have more variety here. We could have many modern solutions that would be completely in the spirit of what we are trying to do and we could exclude unsympathetic work.

Mr. Williams: Until very recently, of course, this sort of thing was thought to be impossible. Legislation had to do only with such things as health and safety. But a ruling by the Supreme Court of The United States, in 1958 I think it was, said that a community was just as much entitled to rule on matters affecting the beauty of a town as on matters of health. That decision was written by Justice Douglas, I believe.

Mr. McHugh: Is it not possible for us to have an ordinance that would permit us to control more than architectural design — because architecture is only a small part of the charm of the city. The varying widths of the streets and street furniture and trees, things like that are important parts of the character of a city. If only we could have an ordinance that would let us preserve and improve that character, would let us build, in any part of the city, a building that bridged the past and the future, as well as the U. S. Embassy does in New Delhi.

What we have had up to now has been a negative kind of law. It has been a failure because some very unfortunate buildings have been approved by a planning commission that couldn't do anything else. Bad designs, but ones that technically were within the law. We need a law such as Mr. Meem is talking about that would give discretion to a commission. We all agree that we want to keep the delight of Santa Fe — I am all for things that are done for joy. But let us do more than just say "no."

Mr. Mumford: A city planning authority with power and confidence could undoubtedly set a much better standard for many other things. One of the things that makes Old Santa Fe so charming is that the street network is composed largely of narrow streets with only an occasional opening. It's built for the pedestrian and on a pedestrian scale. I think it's very important that people who plan the road system should remember that the motor car is only an accessory to the city, not a reason for the city's being. Too much must not be granted to the motor car. One of the things that you ought to be thinking of is establishing a road system, a system of parking lots and garages, which would keep the motor cars from needlessly invading the historic quarter. That insulation would give it infinitely more attraction to the tourist. Tourism, after all, is your major industry in Santa Fe. There is, therefore, every economic reason for reestablishing the pedestrian quality of the historic core while planning the appropriate buildings and parking space on the outskirts, which would mean, probably, the rearrangement of the whole road pattern. You might establish a circular road system which would form a circle around the core, giving access to it, but keeping the major part of the traffic away from the heart of the city.

Mr. Clark: I'd like to get back to one item — control of design. Within our framework control goes back to a commission; it goes back to an elected body. Now how are we going to accomplish effective control within the design concept when your control agency is an appointive agency? This commission has almost got to be an appointed group by an elective agency and within the democratic muncipal administration. I do not mean to imply I'm against this — I think this is right. But to accomplish the ultimate interpretation of our heritage of historical design we would have to set up some superior, overriding authority even above our elected officials.

Mr. Meem: They apparently solved this in California where they appointed a special committee of learned people to pass on these matters.

Mr. Clark: Nevertheless, the learned people are responsible to the elected officials.

Mr. Meem: Yes, I imagine they would be. If the mayor decided he didn't think they did the right thing, he probably could override them.

Mr. Jones: What has been done about this elsewhere, Mr. Mumford?

Mr. Mumford: Well, there are all sorts and grades of control. In Sweden every block has a block committee, which decides on the character of the new house or building that is to be erected in the block. I think we have to realize that some of these problems will only be solved by education. They can't be solved at once. We have to create an interest in the problem to begin with or we shall have arbitrary judgments on the part of those responsible. One of the best examples of a large scale project in the country is the great Lake Shore Development in Chicago, a part of Burnham's original plan. The reason that it was so successful is that the school authorities published a book called Wacker's *Manual*, which was required study in the elementary schools in Chicago. By the time he got through school every Chicago voter knew what the Chicago Plan was and what it would do for the city. Even the most crooked administrations in Chicago car-

ried out this grand plan. I don't think it would have worked so well if it hadn't been for the fact that it was introduced into the minds of the citizens of Chicago in that fashion.

Mr. Williams: I would like to see this done in Santa Fe; start early with the student.

Mr. Meem: Yes, but things are moving so rapidly in this day and age, things change almost over night. Our problems could become acute. If we wait for education, we're liable not to have that Old Santa Fe to save.

Mr. Mumford: You have to do the immediate job, naturally. You have to block some immediate things to keep the way open for the good things that will take time to evolve. These are the normal problems of every community. They work best when a community is sufficiently educated to appreciate that the problems are theirs, not just the responsibility of a handful of devoted people.

Mr. Williams: Mr. Mumford, do you know of examples where ordinances permitting aesthetic judgment in design have passed muster of such governmental agencies as the F.H.A.? It would be quite possible for us to write a local ordinance here permitting the deletion of front yards, side yards or other restrictions which are usual; but I am concerned lest governmental control negate such permissive local regulations.

Mr. Mumford: I think that the F.H.A. regulations have been bad for housing developments. They have a whole set of arbitrary requirements which have kept the imaginative architect from doing a superior job. That's one of the reasons I view with a great deal of hesitation and circumspection the attempts to regulate by law things that have to be regulated but which ought to be regulated in a more subtle fashion. Pressure must be put on people who do the wrong thing to do the right thing. It may ultimately have to take some form of legal regulation, but if you try to put all the regulations into the law itself, you prevent any fruitful development. You have to trust the people who are going to administer the law, especially in municipal matters. You have to give them great powers and of course throw them out when they abuse those powers. That's part of the process.

Mr. Williams: Well, suppose you had an ordinance here that permitted a sub-divider to place houses wherever he pleased on a lot, maintaining certain builder's coverage requirements. He still must finance his development through government insurance. Here we get back to the fact that building designs must meet government regulation, not local desire.

Mr. Mumford: Now's the time to fight the F.H.A. You are quite right, this is where the communities that have been eager for funds sooner or later have submitted to these arbitrary regulations. But this has gone much too far in this country. Both the Federal Housing Authority and the loan agencies must be challenged by local authorities and be made to be much more reasonable and flexible in their requirements.

Voice: Throw the rascals out.

Mr. Mumford: Change the methods. And assert the local authority's duty to consider local conditions and pay attention to them.

Miss Jensen: Some time back you mentioned educating the community. I wonder if we could pursue that a little. I think we all know whom we have to educate, but could you tell me what methods you would use and what other communities have used and what groups have led this education?

Mr. Mumford: There are many, many things that can be done. The most educative thing for any community is to have a vision of what might be. That was the great thing that Daniel Burnham gave Chicago. I'm a severe critic of Burnham's plan — I feel that he neglected very important elements in the community's life and that these original defects will remain in Chicago for a long time. But he gave his fellow-citizens a vision. It was a partial vision but a splendid one, and it changed the quality of life in Chicago, for the lake front is a great piece of coherent and admirable planning.

Now the main thing in education is to have people with vision. I remember very well an interview I had —a very brief one—with an elder in one of the, the only really successful Utopian community in this country, the Amana community in Iowa. I was complimenting him on the extraordinary nature of the community —it is a balanced agricultural community consisting of six villages. For most of a century they led a very prosperous industrial and agricultural life; the whole layout was admirable, but by the mid nineteen-forties it was obviously going to seed. I asked him how this had happened and he said, "It's very simple. We have had no leader with inspiration for the last 50 years." The thing that really makes a difference in a community are people of courage and vision who aren't merely preoccupied with keeping the community running. We all have to do our share in keeping it running. But you must have a few people who have some sense of what the community might be.

The ordinary man doesn't have it. Don't ask him what sort of a house he would like to live in. He doesn't know. He will accept the one that you give him. Don't ask him what sort of a city he'd like to live in. The one he's been living in all the time seems normal to him and he'll accept its worst features as inevitable consequences of modern progress and the worse they are, the more progressive they seem to him!

Therefore, the really important purpose of education is to give people a sense of alternatives, — a realization that they're not condemned to the kind of half-life that they now live from day to day. But there are many improvements that are available, from the better arrangement of the rooms in his house to the better grouping of houses in a neighborhood community, to the better relation of a group of neighborhoods to the city itself with all that that implies. The real weakness in every American city — I'm not just talking about Santa Fe — has been lack of sufficient boldness of imagination about human beings. About mechanical things we have endless resources, endless willingness to experiment and to use imagination especially if the product will sell. But as far as improving our community goes, we're back in the Stone Ages. We need much greater inventiveness, much greater imagination, and a greater willingness to entertain fresh ideas than we have. Once this is implanted in a community a great deal can be done that wasn't possible before.

I speak from the experience that England had in building its New Towns. Half a century ago—sixty years, now — Englishman named Ebenezer Howard had a conception of a new kind of town which would marry agriculture to industry, town life to rural life. He called this the Garden City. And this solitary Englishman gave a picture of a possible life so attractive that he

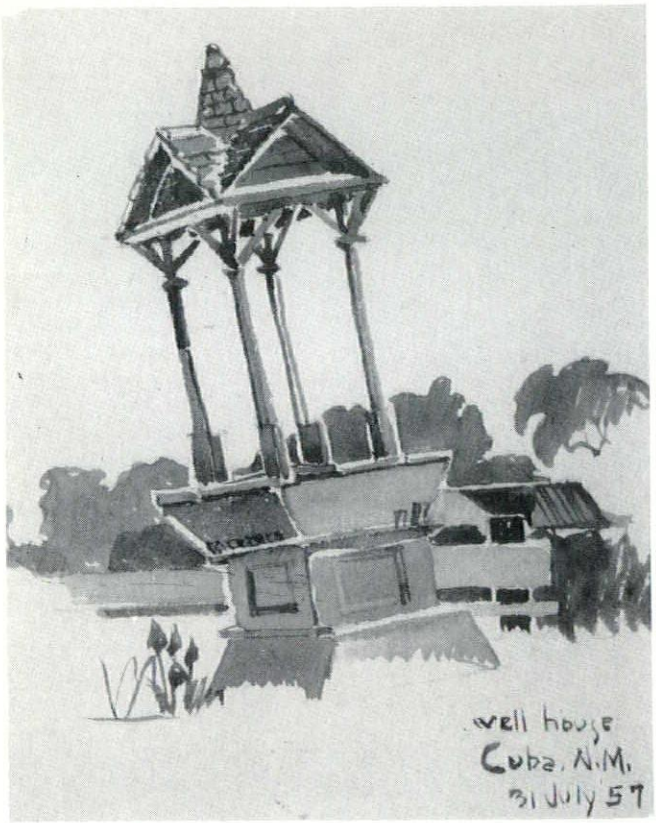
actually got people to invest money in it. The first of the new towns was built in Letchworth, beginning in 1904. This was successful enough, not as successful as he hoped, but successful enough to permit him to start another one after the First World War. After the Second World War, as a consequence of Howard's vision spreading among the people in England and among all parties, fifteen new towns, which eventually will hold a population of a million people, were built. The people who first listened to Howard sixty years ago couldn't have had the faintest notion that such a very large change would take place as a result of this meek little man's fresh idea. Howard really brought a fresh notion of city development into the world.

We need more of that sort of thing and less conformity, less acquiescence, to government regulations, less grabbing for money as in the case of F.H.A. loans or most of the federal highway and urban renewal projects. There ought to be much more municipal and state initiative than there is. We wait around apathetically until the money begins to pour in from Washington; whereas every state could do much more for itself than it dreams possible of doing now, if it spent its money on the right things and didn't waste its money on things which were relatively useless.

I think that's about all for tonight as far as I'm concerned and I'm very grateful to have had the opportunity of finding out what Santa Fe is thinking about for its own future. I'll carry home with me some very precious memories and this evening is not the least of them. Thank you.

Mr. Clark: I predict if you stay here another day, you'll be back. *END*

NEW MEXICO SKETCH BY JOHN MC HUGH



This issue of the *NMA* reaches its readers a little later than usual. The editors have been involved in conferences, and all the preparation and talk that accompanies conferences. This has interferred with magazine production. Bunting took part in a conference of architectural educators at the University of New Mexico on April 5 - 6. Conron was immersed in preparations for the annual State AIA Conference for weeks before it was held on April 19 - 20.

The topic of the Conference was "The Ugliness Around Us." Recordings made of the discussions at the Conference will be edited and a full report on that meeting will be published in July-August issue of the *NMA*.

CONFERENCE AWARDS

A brief announcement might be of interest at this time on the Architectural Awards which were announced at the final banquet.

FIRST AWARD to the Architects Associated for their "Proposed Plan for the New Mexico State Capitol, Santa Fe, N. M."

FIRST AWARD to Flatow, Moore, Bryan and Fairburn for their "College of Education, University of New Mexico, Albuquerque, N. M."

MERIT AWARD to John Reed for his "Marberry Plaza, Albuquerque, N. M."

MERIT AWARD to Ferguson, Stevens, Mallory and Pearl for their "Mountain States Telephone and Telegraph Exchange, Albuquerque, N. M."

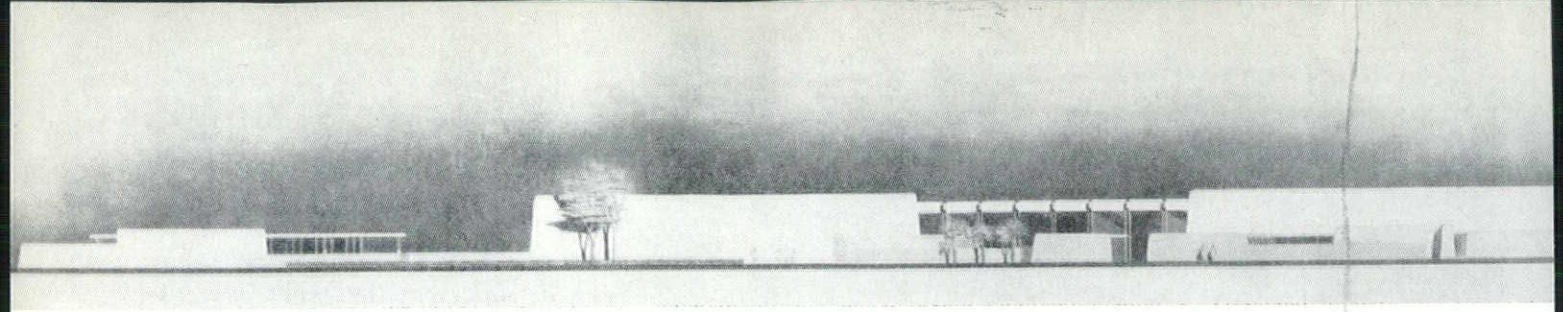
CITATION to W. T. Harris for his "Church Building, Fellowship Unit, Hobbs, N. M."

CRAFTSMAN AWARD. This year the New Mexico chapter of AIA gave for the first time an award to a craftsman who has rendered outstanding service to architecture. This award was presented to John Tatschl of Albuquerque.

SCHOLARSHIPS

The University of New Mexico has accepted for the Department of Architecture a $100 scholarship from the Albuquerque Lumber Merchants Association. The money for the scholarship, which comes from the Southwest Pine Association, will be awarded to a student on the basis of a design competition. Professor John Heimerich, Chairman of the Department, has announced that the first competition problem will be the design of "A Branch Library in Wood."

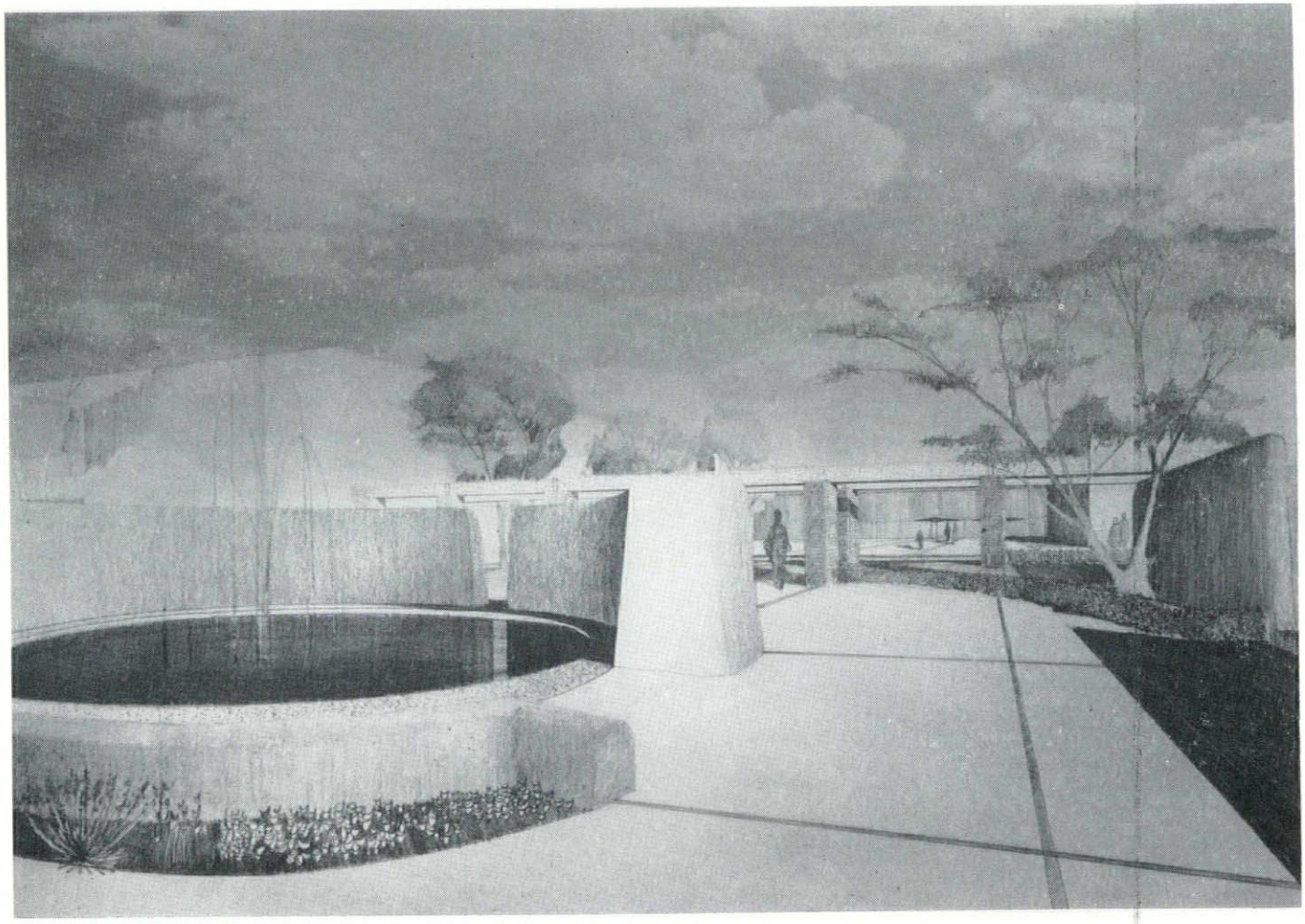
On a national scale, the Portland Cement Association has announced an Awards Program for Architectural Students. based on a jury decision, six scholarships to the summer session at the Fountainebleau School of Fine Arts in France will be awarded on a regional basis. They will go to students who are completing their fourth or next-to-last year in an accredited school of architecture. Entries in the national competition will be selected from designs submitted by students as part of their regular class assignments. Each school is limited to a single entry which has been selected by its faculty. The jurors for this competition are Craig Elwood of Los Angeles, Richard Bennett of Chicago, and Peter Blake of *Architectural Forum* magazine in New York City.

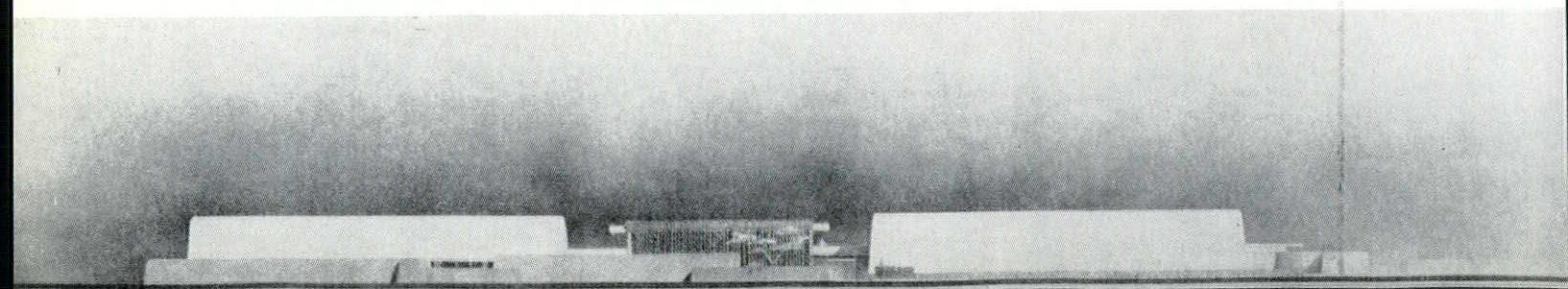


COLLEGE OF EDUCATION, University of New Mexico

Flatow, Moore, Bryan and Fairburn Architects

Underwood and Testman, General Contractors





Proverbial among architects is the statement that it takes two people to create a good piece of architecture: a good client and a good designer. The "client" in this instance included a dean, a faculty building committee, the faculty of a professional college, and the administration of a large university including its president. The "designer" of the undertaking was the largest architectural office in the Southwest assisted by a small army of technical experts and consultants. But no matter the arithmetic, a good piece of architecture, even a great piece of architecture has resulted.

One reason for the unquestionable success of the UNM's new education complex was the excellent program of requirements laid down by the College of Education. No architect can produce a satisfactory design if his client is unsure of himself and his needs. The design of this group of buildings was preceded by literally years of preparation and study. A faculty building committee, with representatives from all departments within the College, coordinated in the course of dozens of sessions the College's practical requirements as those requirements emerged from close study and reexamination by the total faculty to the philosophy, role, and program of teacher education in an all-purpose university. In all these sessions the goal of raising the quality of teacher education was paramount.

Early in the planning College and University officials fortunately realized the value of an architectural coordinator — in this instance a teacher as well as a practicing architect — who was able to assist the faculty and dean in formulating their decisions in meaningful architectural terms.

Presented with the clients' requirements, the architects studied them for half a year. The first two months investigation culminated in a fifty page preliminary "Space Programing" study. Solutions and alternative solutions to problems were presented here and the clients were asked to make specific comments and choices. The decisions made at this stage formed the basis for the final planning of the complex during the succeeding four months.

A description of the building would be interesting but more voluminous than this short article permits. More petinent here, perhaps, would be an attempt to summarize the architectural achievements of Messers. Flatow, Moore, Bryan and Fairburn in this significant commission. Perhaps the term *aims* would be more appropriate than achievements, for it is still far too early to pronounce the final verdict. The landscaping is not finished at the time of writing and students and faculty for whom it was built have scarcely settled down to using it.

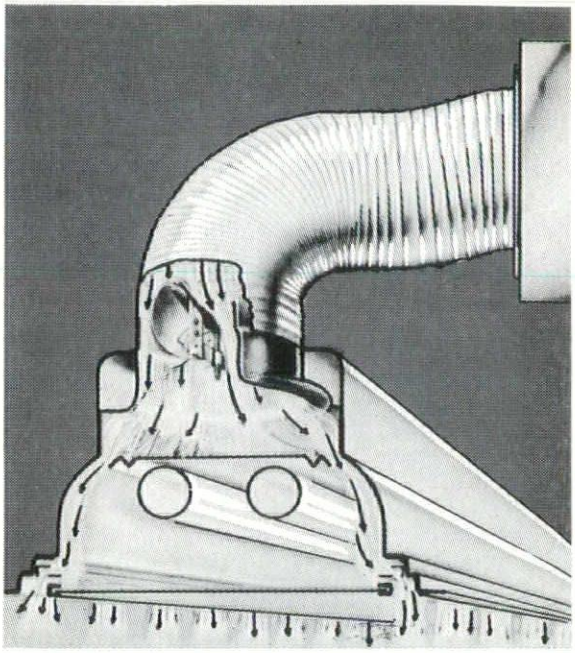
These design aims might be summarized under six headings: three of them practical; three aesthetic. The practical matters can be condensed in a very few observations, although this is in no way a reflection on their relative importance in the total program. As far as *building maintenance* is concerned the architects had two goals: one, to break the curtain walls away from the supporting framework, and, two, to simplify the roof structure. This separation of walls and structure was necessary if the integrity of the exterior wall surfaces were to be preserved. Not to mention the expense of maintaining it, a simulated "adobe" wall simply looks absurd when the underlying concrete framework is revealed by a pattern of crazes and cracks. As for the roofs, by simplifying the cut-up pattern of a building's roof and by reducing the numerous changes in level, redundant flashing and maintenance costs can be significantly reduced. In other words, the problem of building maintenance is a matter of simplifying the envelope which contains the building and doing this with appropriate materials. These particular goals were established in light of experience in building maintenance under the extreme climatic conditions that pertain in this section of the country.

The problem of *cost* is a tricky one to settle as nothing is as easy to influence as figures. What was the cost per square foot of this building complex? The answer you get, of course, depends upon the factors you have chosen to include in your consideration. A maximum figure of $15.38 p.s.f. for the total outlay would set the critics chortling. But this figure covers expensive grading and landscaping and it includes art fittings as well as a good deal in the way of built-in furniture and laboratory equipment. An intermediate figure of $11.90 p.s.f. could be quoted for the Classroom Building alone in order to compare it with similar school building programs in Albuquerque. A minimum $7.69 might be advanced also if one chose to include *all* the usable space provided for human activity outside as well as inside. As for the last practical matter — *required construction time* — a record 300 calendar days speaks for itself.

Now for the aesthetic aims. Let us begin with the *incorporation of the arts* in architecture. One triumph of the building is the vibrant wall of colored glass by John Tatschl. Its pulsating radiance permeates the whole Administrative Center and provides the entire building complex with a heart. From inside and out, in daytime and at night, this magnificent wall is a delight. And it demonstrates once again how a liability — for a large expanse of window on a west wall in a desert setting *is* a liability — can be turned into an asset. (The author of this window, incidentally, was chosen for the first CRAFTSMAN AWARD given by the State AIA at its recent annual convention in Santa Fe. At the same time the architects for the College of Education buildings received a FIRST AWARD). At any rate, the presence of this wall is as great a tribute to the architects' perseverance as to the designer's skill.

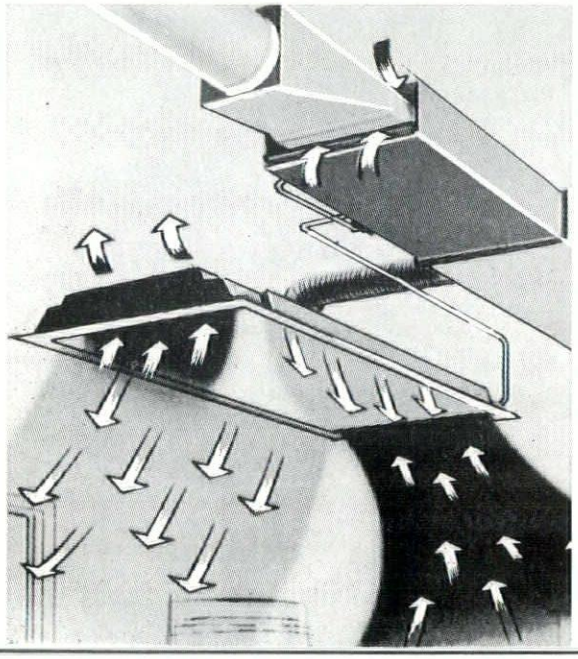
Other art "accessories" are present, one suspects, more because it was the enlightend thing to do. What there is of Mr. Paak's ceramic mural is quite nice, but to be effective, a much larger area would have had to be glazed with the ceramic panels. Probably the ceramic splash basins will function practically as well as aesthetically after the landscaping is finished and when they have been aligned with the rain spouts whose water they are supposed to catch.

The heart of the design problem and the crux of the controversy that the buildings have raised is an old one: tradition vs. the modern — or at least what momentarily passes for modern. The distinction of Mr. Flatow's design, in the opinion of this reviewer, is that while it respects and draws inspiration from traditional architecture of this region, it also accepts modern technology without apologies. And in drawing from both the old and the new, the design avoids



Explore a new concept in Architectural Design

HEATING with LIGHT!



The new concept of using the high foot-candle light levels as a vehicle for heating many buildings is capturing the interest of progressive architects throughout the United States.

A typical office building utilizing the new foot-candle levels throughout the structure will require 8w (watts) per square foot of fluorescent lighting. Eight watts per square foot will heat the typical office building satisfactorily. This is not conjecture. The Georgia Power Company's building (as an example) is practical proof. The design temperature in Atlanta is 10 degrees F.: this typical office building has a heat loss of 12,500,000 Btu's per hour at 10 F. . . . the lighting system for this building produces 15,000,000 Btu's per hour.

Heating with light has been designed into many structures traditionally using large wattages of lighting (jewelry stores, for instance). The Imperial Oil Company of Canada in Toronto as well as supermarkets in Montreal use no other heat source. A properly designed lighting system provides adequate heat to satisfy the thermostat which reduces the heat needed from auxiliary equipment.

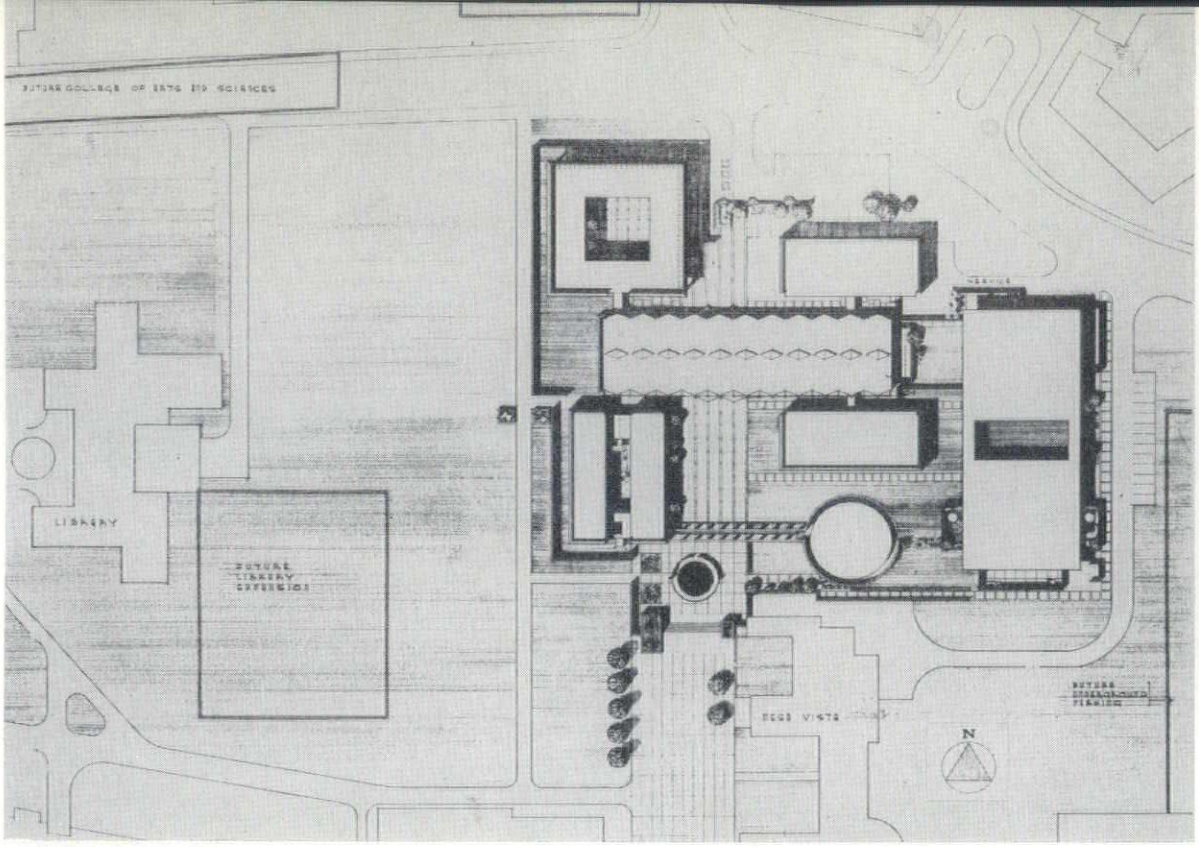
Almost any commercial building and many industrial buildings that follow the recommended lighting practices will need no other heat source.

Why not take full advantage of this FREE by-product and consider the Lighting-Heating-Air Conditioning combination in your future plans and engineering studies. Especially on highly competitive jobs. Consult your Public Service Company of New Mexico Lighting Engineers to find out how you can incorporate a heating system with adequate lighting.

Enjoy a New way of Life

Total ELECTRIC living

Public Service Company of New Mexico



crippling compromise and rises, instead, to a new and creative plane which is uniquely appropriate to the particular problem at hand.

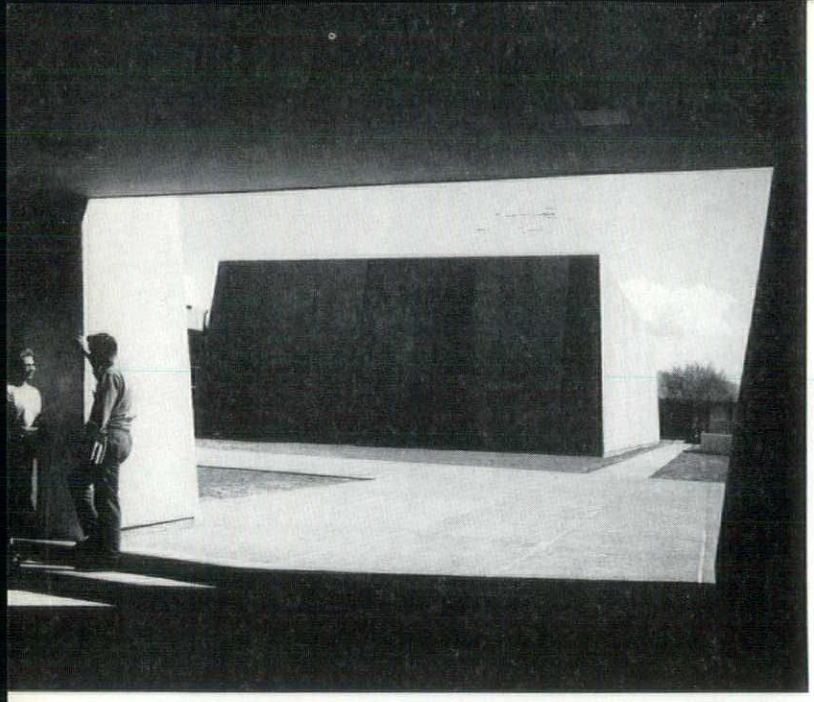
Probably the most basic characteristic of the traditional architecture of New Mexico is that the building serves as a protecting shield against the harsh extremes of the desert environment. Historically this has been expressed by stout walls, battered and unbroken expanses of wall surface, by a strong, compact silhouette and by a clear geometry. A look at the education complex reveals how accurately this description also characterizes it.

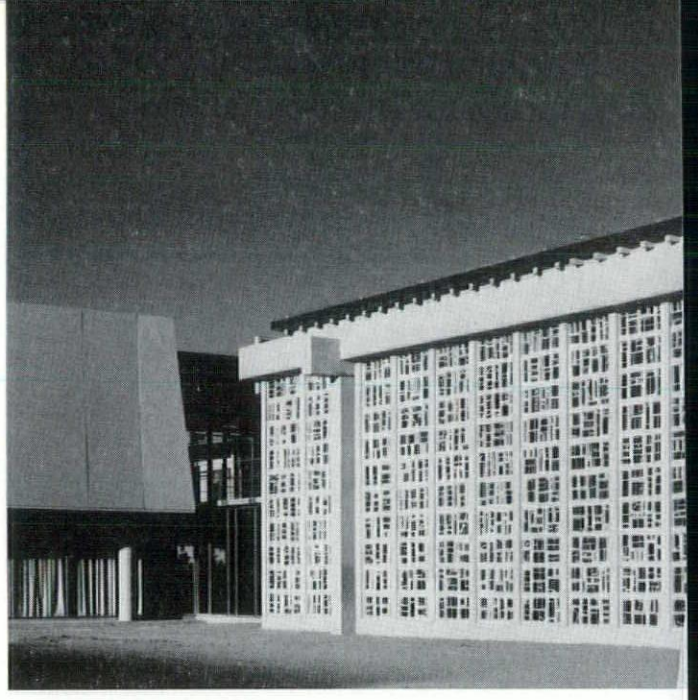
Yet at the same time, the design accepts twentieth century planning requirements and technology. The easy defiance of gravity by wide spans and hovering ceilings permits the mobility and flexibility of plan that a modern building must have. The great sheets of glass and the precise metal frames permit a concentration of light and airiness where they are appropriate. Modern technology is dramatically present in the pre-fabricated concrete panels which girdle several of the buildings. With minimum interruption and set at an angle, these panels recall the battered silhouettes of adobe buildings, yet their moduair form and precise definition clearly express their prefabricated origin and curtain wall function. In such skillful ways as these, modern technology has been used to extend the traditional architecture of the region.

The aspect of the College buildings that unnerves some observers is the omission of the obvious but superficial symbols of traditional Southwest architecture. Because the design deletes the *viga* ends and *zapatas*, the contrived undulation of the parapet line and forced batter, these critics close their eyes to the far more basic roots of the New Mexican tradition which the design has respected and drawn ideas from. It is also this group of critics, grasping for recognizable cliches, who see the new college building as something Egyptian or equally absurd.

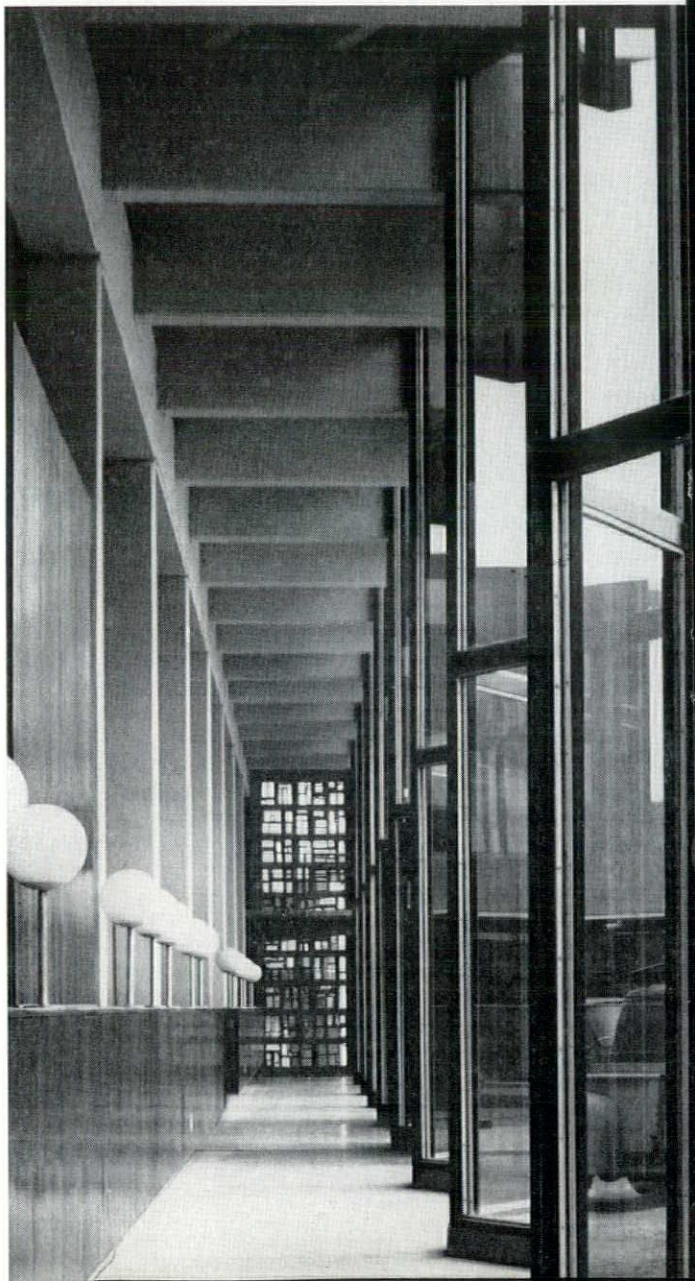
In one important aspect, however, the College buildings frankly differ from traditional usage. This is in the matter of scale. Practically all of the early architecture of the Rio Grande was domestic in scale. Its scale was established by the distance a moderate-sized beam could conveniently span — about fourteen feet. This structural limitation resulted in a modular repetition of cube-shaped rooms piled up into terraced compositions like Taos Pueblo. In an attempt to retain this domestic scale, which can certainly be quite handsome, most of the buildings built on the UNM campus during the last two decades have been designed with frequent breaks in plane of peripheral walls and variations in roof level. This type of building has proved expensive to build and maintain. In contrast to this approach, the College of Education frankly eschews the old domestic scale with its attendant complexity of massing. It employs, instead, a few bold masses. These big forms, however, do not appear inhospitable and uninviting to the student. Despite their bold scale, they are actually more inviting than the older campus buildings for all their simulated domesticity. This achievement is a matter of the way *space is used*, which brings us the third point of our aesthetic aims.

Less obvious than the previous point, the utilization of space is probably the source of the design's greatest merit. Although we have seen that the complex is girdled by barrier-like walls which protect the oasis-like interior, there are enough interruptions in this barrier to beckon the pedestrian within. Once he approaches the inner area, he is drawn inevitably into the life and movement of the whole composition. Here he experiences a kaleidoscopic variety of space relationships. A continuing interplay between the spaces of differing character or between spaces and masses, keeps the visitor alert. The environment is not static; at any moment the pedestrian is aware of a variety of space relationships to be investigated; there are choices to be made. The atmosphere is vital and stimulating.





All photographs by Dick Kent.

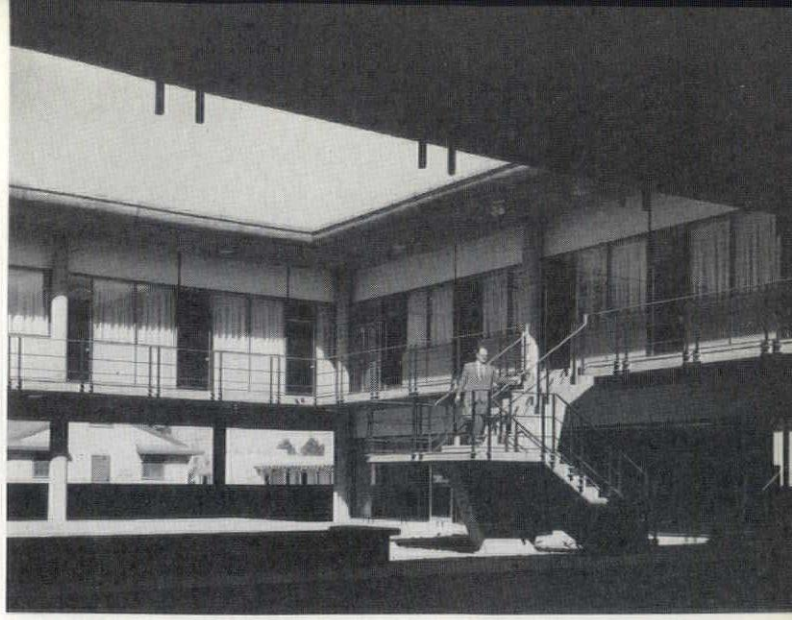


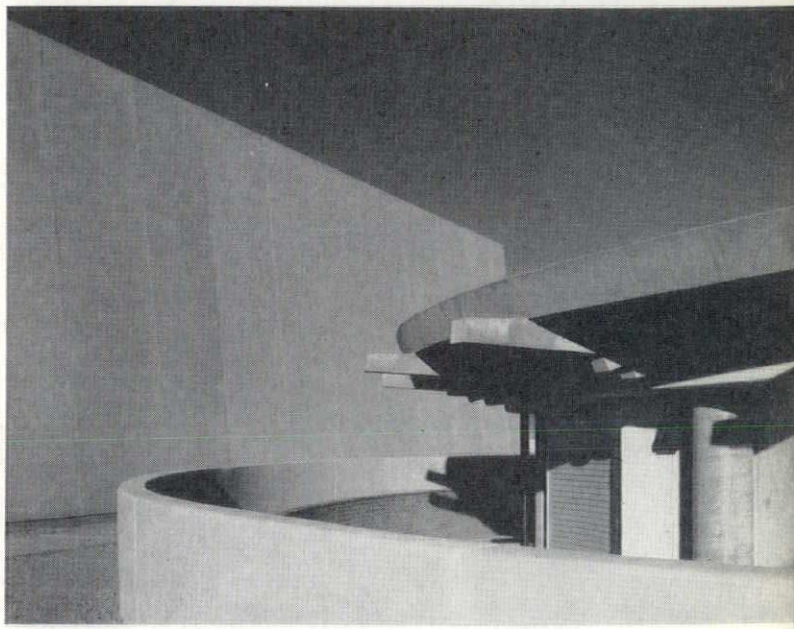
For purposes of contrast, compare this arrangement with the older campus buildings which are solid and external. Almost sculptural in concept, they are static, geometric shapes isolated in inert space. One observes them from a distance; he does not become involved in the interplay of building and space and thus is not drawn into the composition. Despite the domestic scale of the older buildings, they are not, therefore, as humanly engaging as are those of the new complex.

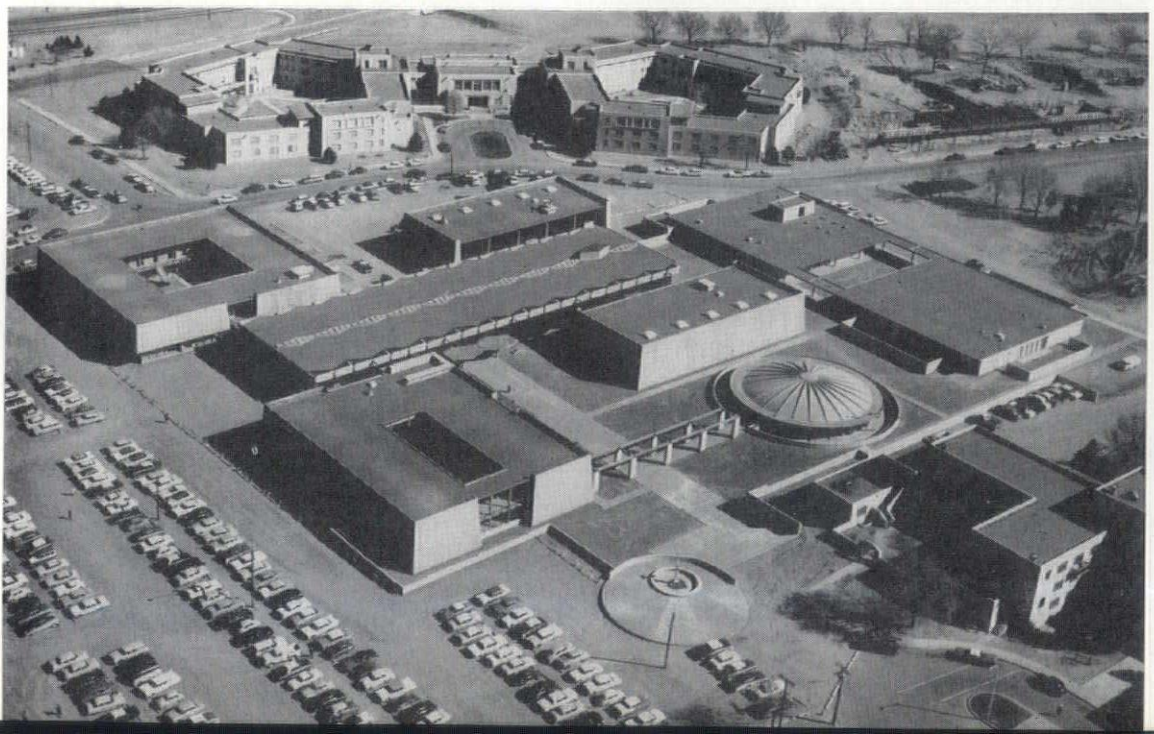
While discussing the engaging relation between the buildings and space, one additional point should be noted. By means of the great windowless walls which wrap around the periphory of the education complex, a protected, intimate oasis-like area has been created at its heart. This sheltered area contrasts refreshingly with the starkly impersonal streets and parking lots on the outside. This method of organization follows both the traditional Spanish Colonial heritage with its patio-centered dwellings and also the new master plan for the UNM campus which was prepared by the John Carl Warnecke Associates in 1960. The College of Education buildings are almost the first to strike out in this new direction. Heretofore the UNM campus has been treated as the traditional green park, used on most American college campuses, where a series of architectural displays are distributed throughout the park. Separated by fairly wide intervals of space, they constitute a series of self-sufficient displays, each to be experienced as an individual geometric composition. With a few exceptions like the Geology and Biology buildings, the older structures have not worked together to articulate the intervening space and to create a sheltered environment.

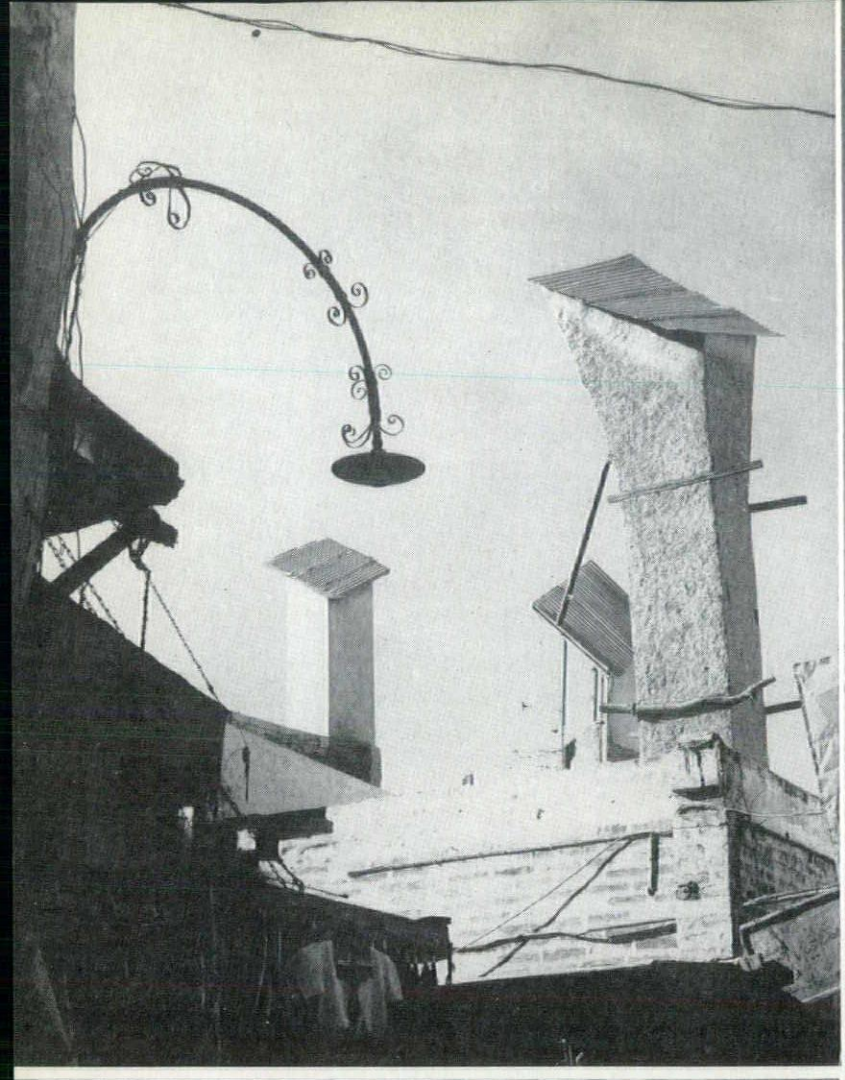
A significant chapter has just been written in the history of the University of New Mexico's campus development. A bold yet eminently logical and well-considered approach to the problem of a modern architectural expression for this region has been indicated. Whether the students and faculty of the University and above all its administration will have the sensibility to realize the importance of the achievement and to follow the direction here indicated remains to be seen.

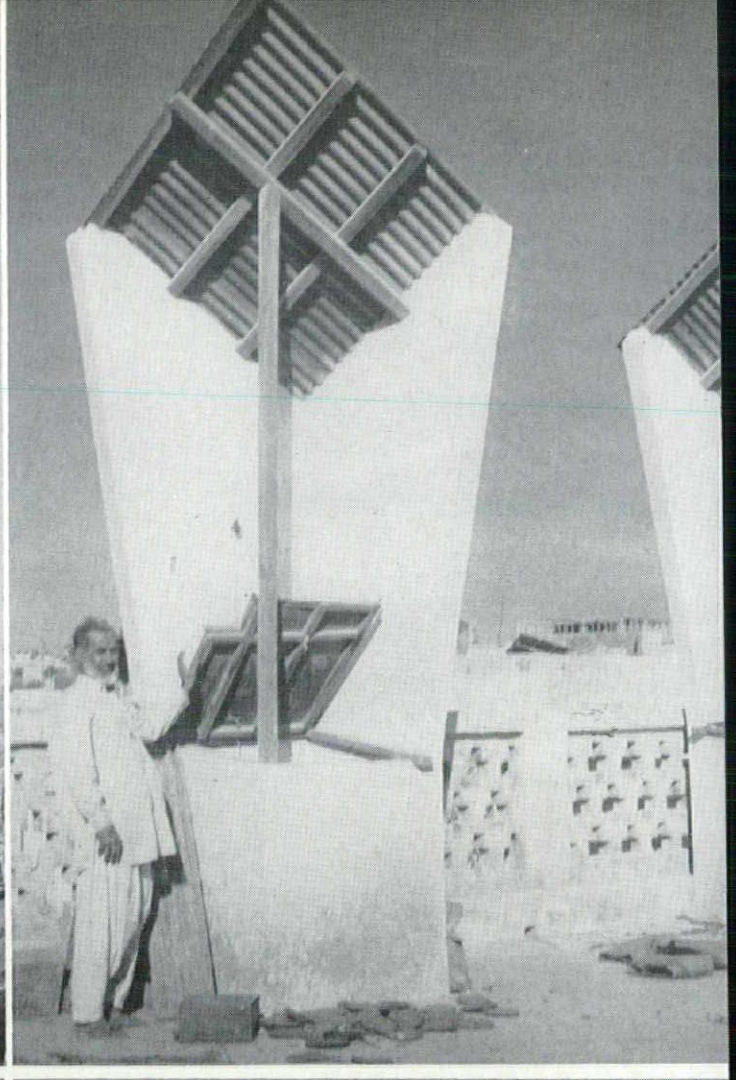
—Bainbridge Bunting

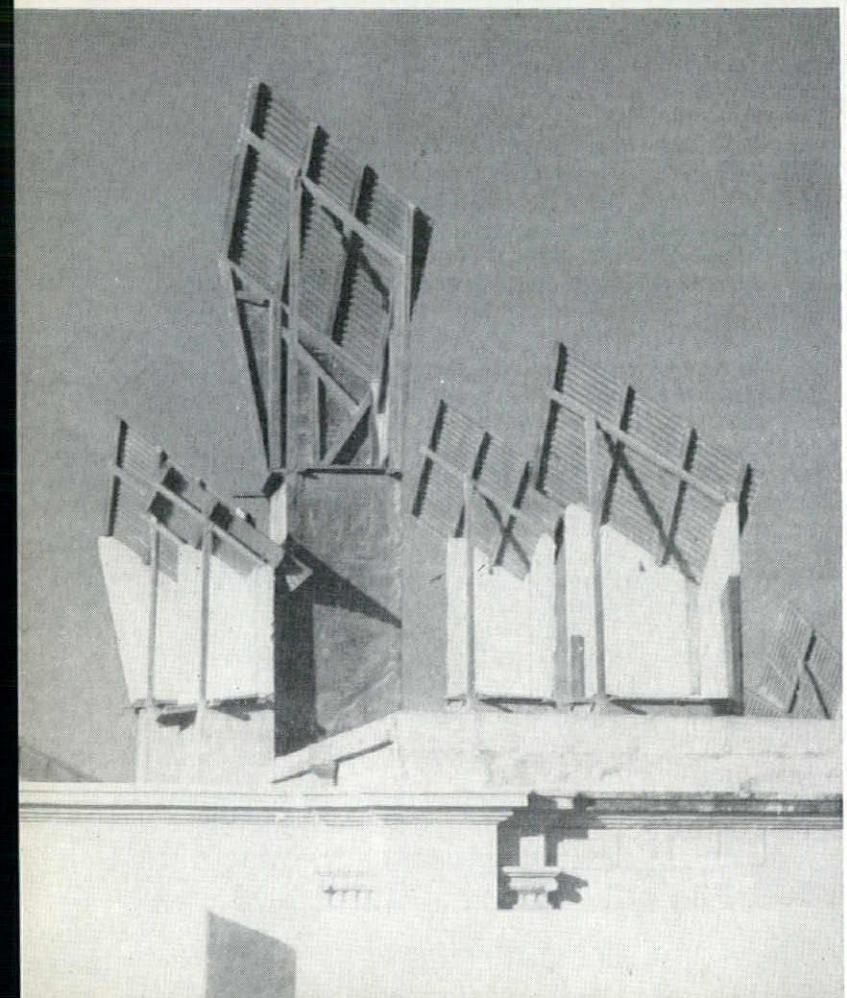


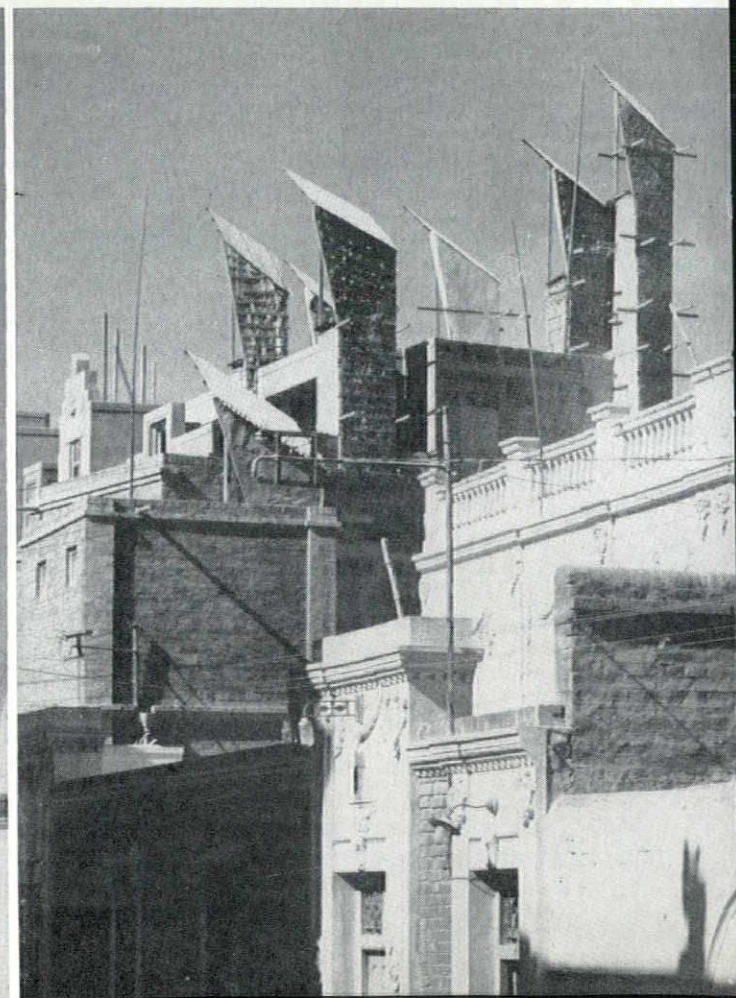


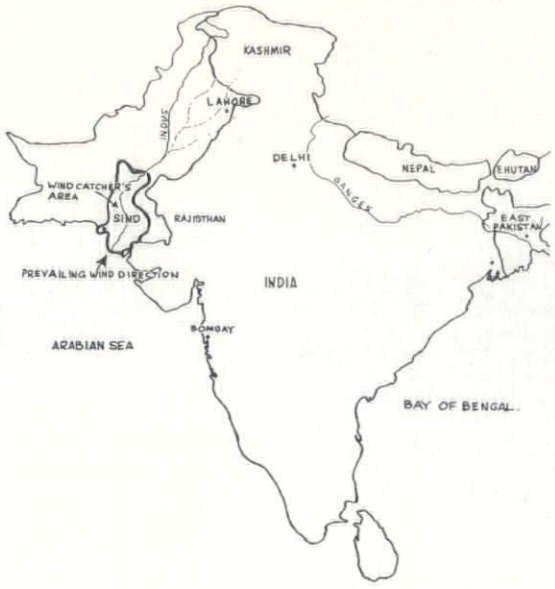












Sindi Roofscape

Harold R. Benson

Material collected by Zaheer Alam and photos by Mian Abdul Majid of the National College of Arts, Lahore - West Pakistan.

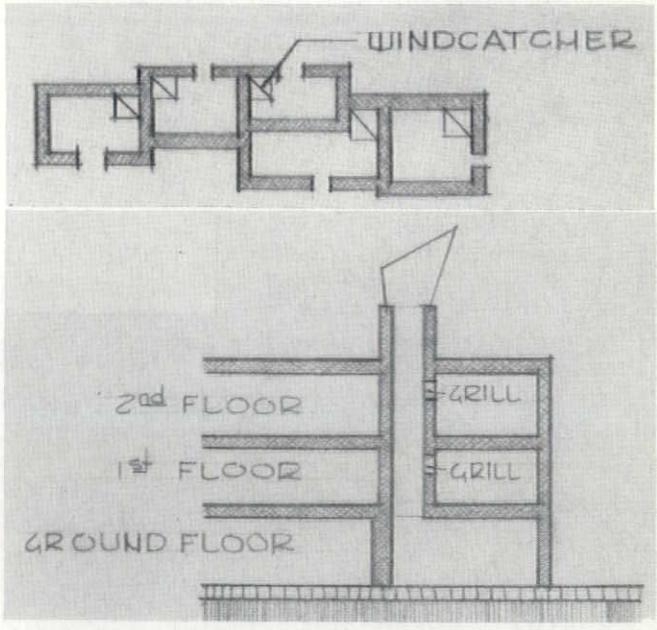
The strange contraptions on top of the dwellings of the Lower Sind district of West Pakistan express natural man's attempt to control his environment. The "*wind-catcher*" or "*bad-gir*" is a local solution to the particular climatic conditions of the Indus Delta and is not known elsewhere. It is simply a scoop which directs the prevailing wind into the living spaces for cooling and ventilation.

Because they are primarily used for urban residences which were built of temporary materials, it is difficult to trace their origin. There is one mosque, however, in Tatta which incorporates a permanent wind-catcher. The Shah Jehanni Mosque was erected in 1663, but the domestic use goes back at least to the 15th Century. Probably their ancestor was the "mugha" or opening in the roof. The "mugha" has three possible uses: First, as a method of entrance. In the earlier periods, as in the Pueblos of America's Southwest, the ground floor level had no door but ladders up to the roof and then down again into the rooms. Second, as a light source in the rooms. Even today there are few wall openings other than doors and "mugha" are extensively used throughout West Pakistan. Third, as an escape for smoke from cooking fires. The usual practice, however, was to place the kitchen outside the houses in the Sind so this reason is least likely. The archaeological excavations, most extensively at Mohenjodaro 2500-1500 B.C., have not uncovered any evidence of roof structures. Therefore, it is not yet known if any form of "mugha" or "wind catcher" was used.

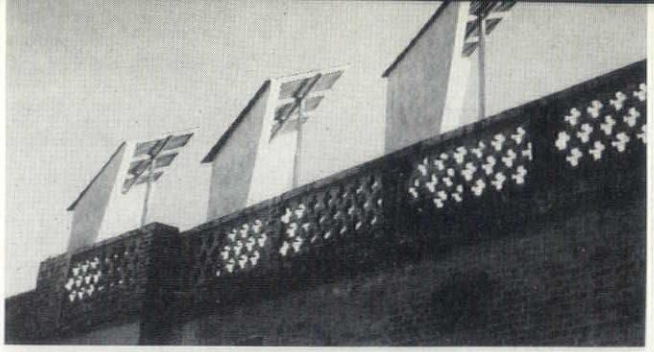
The Lower Sind is a tropical semi-arid steppe with dry winters. In the hot weather period (April to June) the temperature goes up to 120°F and some times higher. Along the coast there is, in the afternoons, a pleasant southwest sea breeze, which keeps the maximum temperature down to about 95°F. When low pressures appear in the North Arabian Sea, the sea breeze over the Indus Delta is stopped and hot southeast desert winds from Rajastan bring high temperatures and sultry weather. The winds in the monsoon period (July to September) and post monsoon period (October and November) continue from the southwest and bring some rain (6" average per year.) During the cold weather season (December to March) the winds are from the northeast. A high pressure area from the middle of December is established over Central Asia and the Middle East and the maximum and minimum temperatures during this season are from 75°-55°F.

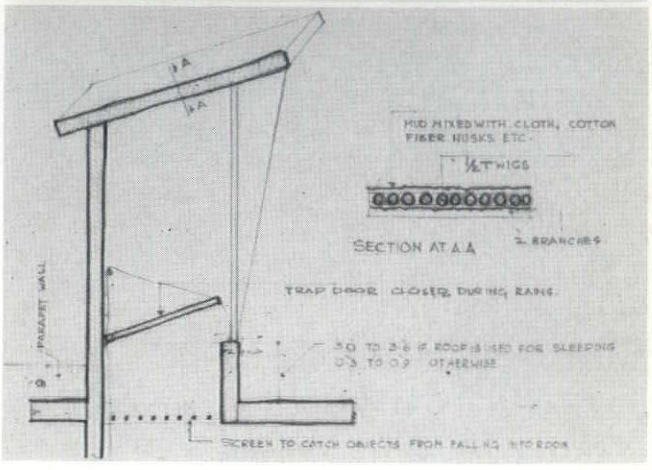
Most of the wind catchers operate from March to September. Although some are used in the middle of February and late October. Because the winds during operation are continually southwest, the wind catchers are permanently fixed. The "mugha" are always on the northern walls and usually in the corner.

On one story blocks, each wind catcher represents one room. For multi-stories a variation is used to service rooms above one another and one catcher may service two or more rooms. In this case the catcher also is used for verbal communication between flats.



Building materials and construction methods are the same as for the main structure. The local materials are bricks or wood lath and mud plaster. The two types of bricks are "*kachha*" or sun baked and "*pucka*", oven-baked and still much the same as those at Mohenjodaro. Recently concrete, metal sheets and lumber have been used, but the form has not been altered. A



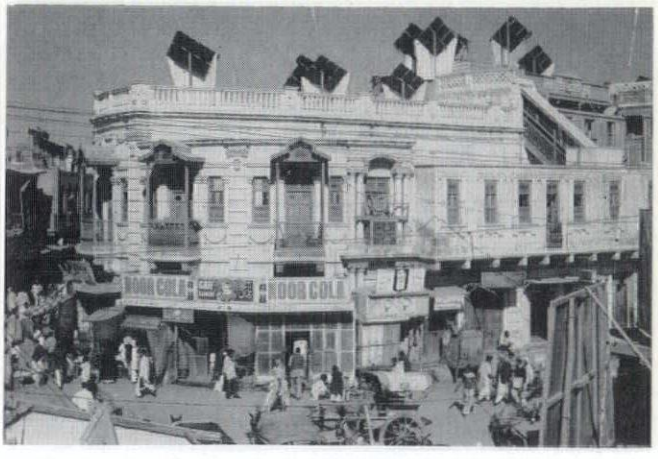


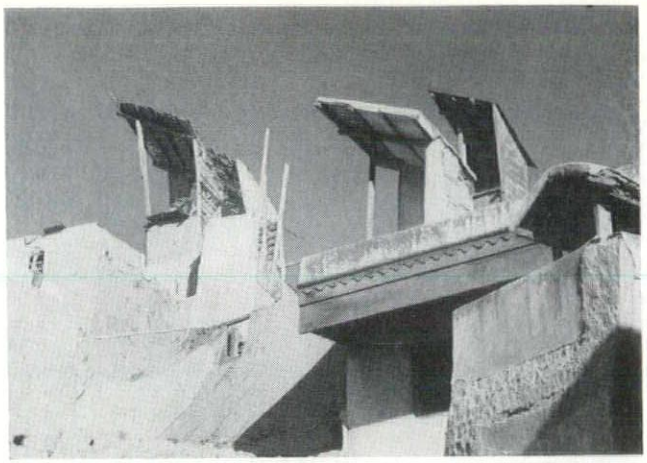
trap door with pulley lines allows the door to open or close from inside the room. A screen along the ceiling line stops objects on the roof from falling into the rooms.

Although the special geographical and climatic conditions of the Sind are not likely to be repeated, there is another more sophisticated solution found in New Gourna, upper Egypt. This structure acts as an evaporative cooler. The unit is placed on the side of the room which faces the direction of prevailing winds. Pourous pottery jars near the top are filled with water which drips. The water cools by evaporation when it drops onto charcoal placed at the bottom. Air passing around the jars and charcoal is cooled appreciably. The Egyptian innovations are not found in the Sind, but probably could be effective.

The ingenuity of the Sindi has adopted three architectural forms which combat the extremes of the environment very effectively. The obvious logic of the form probably has been the result of trial and error for many generations. Today, however, the solution is another representation of the genius of the anonymous architect.

—Harold Benson





CONTRIBUTORS TO THIS ISSUE

Lewis Mumford needs no introduction, certainly, to NMA readers.

Harold R. Benson, an associate professor of architecture at the University of New Mexico, Mr. Benson is on leave for the current year to teach architecture at the University of Lahore, under a Fulbright grant.

the new mexico architect nma

Published bi-monthly by the **New Mexico Chapter, American Institute of Architects**, a non-profit organization, at 301-D Graceland Drive S.E., Albuquerque, New Mexico.
Editorial correspondence: All correspondence should be addressed to Bainbridge Bunting, 5021 Guadalupe Trail, Albuquerque, New Mexico. No responsibility will be assumed by the editor or publishing organization for unsolicited contributions. Return postage should accompany all unsolicited manuscripts.
Advertising correspondence: Requests for information and other correspondence should be addressed to W. M. Brittelle, Sr., 301-D Graceland Drive S. E.
Change of address: Notifications should be sent to N.M.A., 717 Canyon Road, Santa Fe, New Mexico, at least 45 days prior to effective date. Please send both old and new addresses.
Subscription rates: single copy $.35; one year $2.00. Second class postage paid at Roswell, New Mexico.
Editorial Policy: Opinions expressed in all signed articles are those of the author and do not necessarily represent the official position of the New Mexico Chapter, A.I.A.

INDEX OF ADVERTISERS

Albuquerque Blueprint Company	21
Albuquerque Gravel Products Company	12
Albuquerque Testing Laboratory	24
Atlas Building Products	4
Blue Streak Reproductions	26
Blumcraft	6
Broadway Lumber Co.	24
Builders Block & Stone Co., Inc.	20
Crego Block Co., Inc.	13
General Pumice Corporation	21
Gibson Lumber	12
Hanley Paint Mfg. Co., Inc.	10
Hunter-Hayes, Elevators	13
Kinney Brick Company, Inc.	21
Martin Marietta	5
Miller & Smith Mfg. Co., Inc.	5
Monarch Tile Manufacturing, Inc.	2
New Mexico Marble Tile	26
New Mexico Pipe Trades Industry	4
Office Interiors	12
Edgar O. Otto & Sons, Inc.	28
Perfection Truss Co.	20
Portland Cement Association	27
Public Service Co.	16
Sandia Auto Electric Service	20
Southern Union Gas Company	11
Southwest Vermiculite Co.	25
Stryco Sales, Inc.	24
Ultra Marbles, Inc.	24
Wellborn Paint Mfg. Co.	21

PAC **MEMBER PUBLISHERS ARCHITECTURAL COMPONENTS.** Official Publications of Components of the American Institute of Architects in 26 key states. Advertising and listing in Standard Rate and Data Service.

National Representatives. Peter Bovis & Associates, 10 West 45th St., New York 36, N. Y.

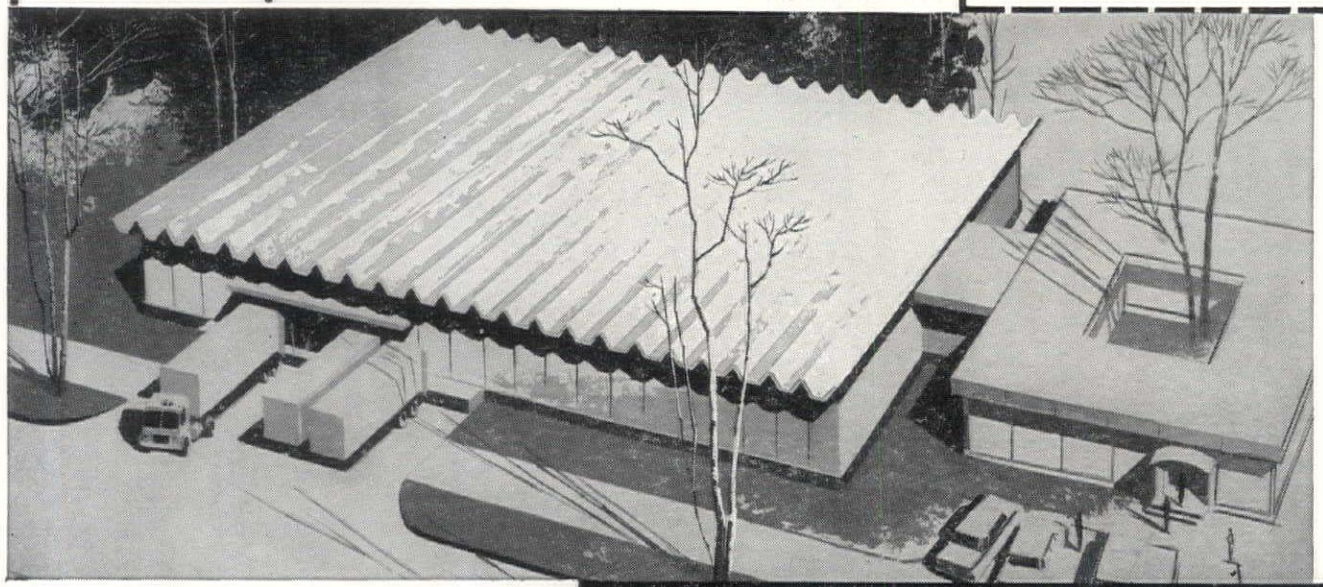
Area Reprensentative. W. M. Brittelle, Sr., 301-D Graceland Drive S.E., Albuquerque, N. M. Tel. 255-7566

NO. 8 | folded plates

a.i.a. file: 4-a

Prepared as a service to architects by Portland Cement Association

clip along dotted line



Tremendous span and load-carrying abilities characterize concrete shell roofs in the form of folded plates—also known as F/P's. In industrial construction folded plates are being used more and more to provide great areas of column-free space for manufacturing or storage.

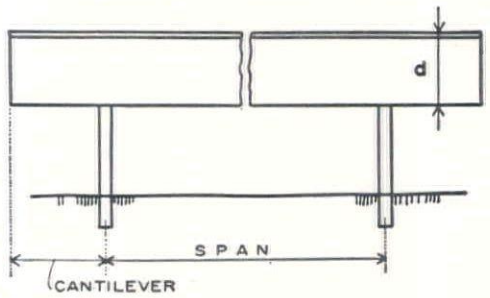
The ability of folded plates to cantilever can be applied advantageously in the design of schools, stores and hangars.

There are three basic types (two shown below) of folded plate shells—V-shaped, Z-shaped and a modified W-shape. The economy of F/P's is increased with form re-usage.

Typical span data for V- and W-shaped plates are shown in the tables below.

For more information, write for free technical literature. (U.S. and Canada only.)

CROSS SECTION



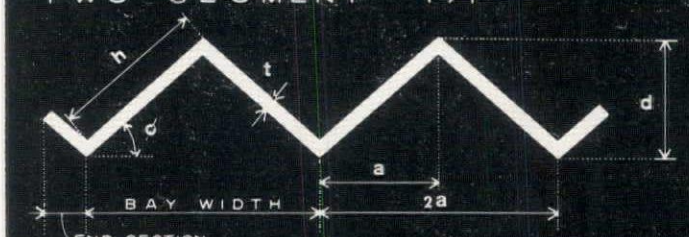
Sufficient cantilever can help to counterbalance the span. The usual span-to-depth ratio varies from 1:10 to 1:15. Example: If span is 40′ long, the usual minimum depth is about $\frac{40}{10}$ or 4′.

Formula:

VOLUME OF CONCRETE IN $\frac{\text{CU. YARDS}}{\text{SQ. FEET}} = \frac{th}{324a}$

h = ft.
t = in.
a = ft.

TWO SEGMENT F/P



SPAN	ø* max.	ø* min.	d max.	d min.	2a (1)	t (2)	reinforcing (3)
40′	45°	25°	4′-0″	2′-9″	15′	4″	1.2-1.6
60′	45°	25°	6′-0″	4′-0″	20′	4″ 6″	1.9-2.7
75′	45°	25°	7′-6″	5′-0″	25′	4″ 6″	2.6-3.7
100′	45°	25°	10′-0″	6′-9″	30′	5″ 6″	4.0-5.2

FOUR SEGMENT F/P

SPAN	ø* max.	ø* min.	d max.	d min.	2a (1)	t (2)	reinforcing (3)
40′	45°	30°	5′	2′-6″	20′	3″	1.5-2.0
60′	45°	30°	6′	4′	25′	3″ 3½″	2.0-3.0
75′	45°	30°	7′-6″	5′	30′	3″ 4″	2.5-4.0
100′	45°	30°	10′	6′-6″	40′	4″ 5″	4.0-6.0

* max. recommended slope is 45°

(1) values shown may vary with architectural design

(2) average thickness in inches

(3) pounds per square foot of projected area

PORTLAND CEMENT ASSOCIATION Suite 705—5301 Central N.E., Albuquerque, N.M.

A national organization to improve and extend the uses of concrete

Postmaster: Return Requested • New Mexico Architect • 717 Canyon Road • Santa Fe, New Mexi

Edmund R. Purvis
1735 New York Avenue
Washington 6, D.C.

Bulk Rate
U. S. Postage
PAID
Roswell, N. M
Permit No. 47